

DEPARTMENT of ENVIRONMENTAL SERVICES
Water Supply & Pollution Control Division - Biology Bureau

LAKE TROPHIC DATA

MORPHOMETRIC:

| | | |
|-------------------------------|------------------------------------|---------|
| Lake: SILVER LAKE | Lake Area (ha): | 87.53 |
| Town: TILTON | Maximum depth (m): | 6.8 |
| County: Belknap | Mean depth (m): | 1.9 |
| River Basin: Merrimack | Volume (m ³): | 1661000 |
| Latitude: 43°27'55" N | Relative depth: | 0.6 |
| Longitude: 71°32'14" W | Shore configuration: | 1.90 |
| Elevation (ft): 464 | Areal water load (m/yr): | 622.0 |
| Shore length (m): 6300 | Flushing rate (yr ⁻¹): | 328.0 |
| Watershed area (ha): 119139.4 | P retention coeff.: | < 0.01 |
| % watershed ponded: 19.8 | Lake type: | natural |

BIOLOGICAL:

15 February 1997

27 June 1996

| | | | |
|------------------------------------|----|-------------|-----------------------|
| DOM. PHYTOPLANKTON (% TOTAL) | #1 | NOT SAMPLED | ASTERIONELLA 50% |
| | #2 | (THIN ICE) | CERATIUM 15% |
| | #3 | | OSCILLATORIA 8% |
| PHYTOPLANKTON ABUNDANCE (units/mL) | | | |
| CHLOROPHYLL-A (µg/L) | | | 3.27 |
| DOM. ZOOPLANKTON (% TOTAL) | #1 | | NAUPLIUS LARVA 20% |
| | #2 | | ASPLANCHNA 12% |
| | #3 | | CYCLOPOID COPEPOD 12% |
| ROTIFERS/LITER | | | 22 |
| MICROCRUSTACEA/LITER | | | 29 |
| ZOOPLANKTON ABUNDANCE (#/L) | | | 60 |
| VASCULAR PLANT ABUNDANCE | | | Common/Abun |
| SECCHI DISK TRANSPARENCY (m) | | | 5.0 |
| BOTTOM DISSOLVED OXYGEN (mg/L) | | | 8.5 |
| BACTERIA (E. coli, #/100 ml) | #1 | | 2 |
| | #2 | | |
| | #3 | | |

SUMMER THERMAL STRATIFICATION:

not stratified

Depth of thermocline (m): None
Hypolimnion volume (m³) : None
Anoxic volume (m³) : None

CHEMICAL:

Lake: SILVER LAKE

Town: TILTON

| | 15 February 1997 | | 27 June 1996 | | |
|-------------------------------|------------------|--|--------------|--|--------|
| DEPTH (m) | | | 2.0 | | 4.0 |
| pH (units) | | | 6.7 | | 6.7 |
| A.N.C. (Alkalinity) | | | 6.1 | | 6.2 |
| NITRATE NITROGEN | | | < 0.05 | | < 0.05 |
| TOTAL KJELDAHL NITROGEN | | | 0.22 | | 0.17 |
| TOTAL PHOSPHORUS | | | 0.015 | | 0.015 |
| CONDUCTIVITY (μ mhos/cm) | | | 75.7 | | 75.8 |
| APPARENT COLOR (cpu) | | | 9 | | 9 |
| MAGNESIUM | | | | | |
| CALCIUM | | | 4.0 | | |
| SODIUM | | | 8.7 | | |
| POTASSIUM | | | 0.64 | | |
| CHLORIDE | | | 12 | | 12 |
| SULFATE | | | 5 | | 5 |
| TN : TP | | | 15 | | 11 |
| CALCITE SATURATION INDEX | | | 3.2 | | |

All results in mg/L unless indicated otherwise

TROPHIC CLASSIFICATION: 1996

D.O. S.D. PLANT CHL TOTAL CLASS

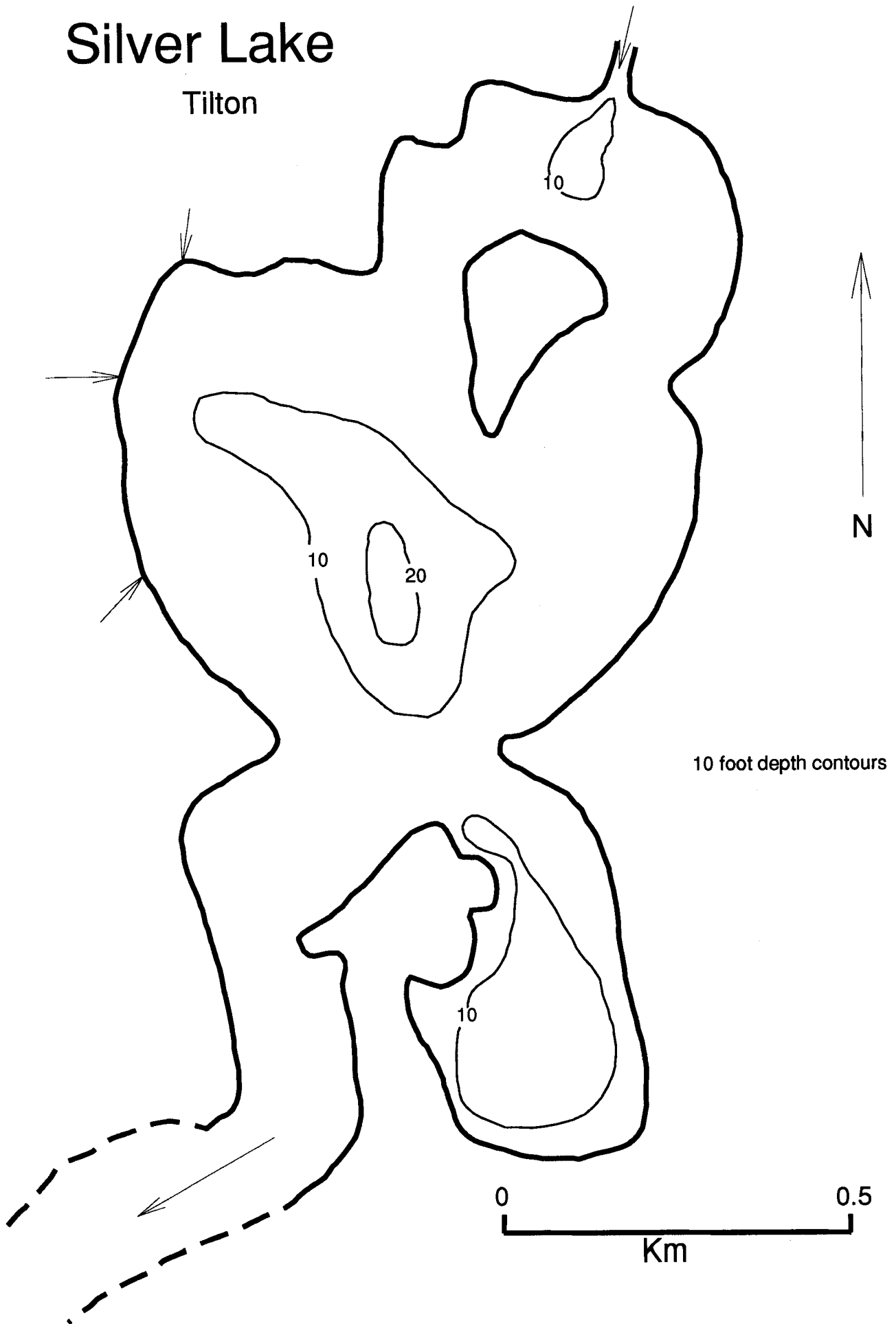
| | | | | | |
|----|---|---|---|---|-------|
| ** | 2 | 4 | 0 | 6 | Meso. |
|----|---|---|---|---|-------|

COMMENTS:

1. Silver Lake was previously surveyed and classified in 1979. There was no change in trophic class and little change in water quality between the two dates. The exotic species of milfoil was discovered in the pond in 1995. It probably floated downstream from Lake Winnisquam.
2. The Winnepesaukee River flows through Silver Lake and is the reason for the rapid flushing rate.
3. No winter samples were collected because of open water and unsafe ice conditions.

Silver Lake

Tilton



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TOWN: TILTON
WEATHER: 70 F, PARTLY CLOUDY, WINDY

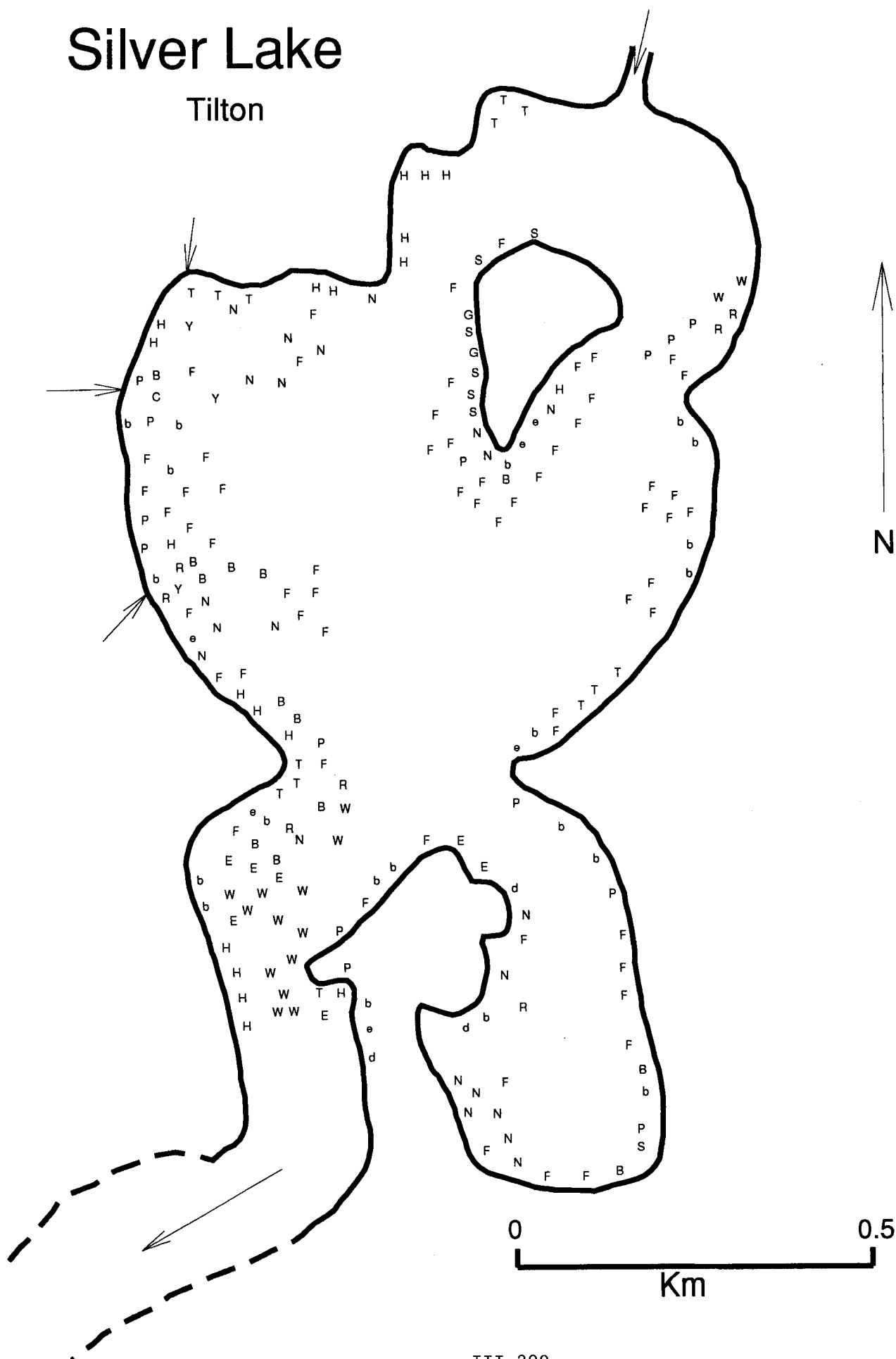
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COMMENTS :

*Dissolved oxygen values are in mg/L

Silver Lake

Tilton



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